

4/27/12

P

Municipality/Organization: North Andover, MA

EPA NPDES Permit Number: MAR041214

MassDEP Transmittal Number: W-034970

Annual Report Number & Reporting Period: Year 9
April 1, 2011 – March 31, 2012

NPDES PII Small MS4 General Permit Annual Report (Due: May 1, 2012)

Part I. General Information

Contact Person: Eugene P. Willis, P.E. Title: Town Engineer

Telephone #: (978) 685-0950 Email: gwillis@townofnorthandover.com

Mailing Address: 384 Osgood Street, North Andover, MA 01845

Certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: 

Printed Name: Andrew W. Maylor

Title: Town Manager

Date: 4/25/12

Part II. Self-Assessment

As of the end of Year 9, the Town has achieved nearly all of the measurable goals for the BMPs selected in the 2003 Notice of Intent and those added in subsequent years to reflect unplanned stormwater activities by the Town.

Stormwater management activities to note include:

- Three illicit discharges were identified during Permit Year 9:
 - A Broken sewer service was identified at 125 Water St. leaking into storm drain.
 - Camera line to find discharge and repaired sewer service.
 - Paint was discharged into catch basin at 157 Berkeley Rd.
 - Visited site spoke w/ homeowner
 - Paint was latex paint
 - Cleaned catch basin sump of debris
 - U-pole broken sewer main at 24 Marblehead St.
 - Repaired sewer service
- The Sewer Department hired a contractor to remove roots and install a 1500 ft PVC liner in the Old Westside Trunk Sewer along the Shawsheen River. This project greatly reduced the threat of sanitary sewer overflows (SSOs) into the Shawsheen River.
- The Water Department cleaned sediment from underground sedimentation bays on Bonnie Lane and repaired damaged drainage at the Water Treatment plant where sediment was running into Lake Cochickewick.
- The Town of North Andover received a \$125,000 grant to design and rehabilitate existing manholes flowing into the Rea's Pond and Winter Street Sewer Pumping Stations that are infiltrated with stormwater during strong water events.
- The Town has formed a NPDES Subcommittee, which is comprised of members of the Planning, Conservation, Water & Sewer, Engineering, Facilities, GIS, Community Development and School Department.
- The Town sent out a Dog Waste Public Service Announcement in the annual Consumer Confidence Report to notify residents of the Dog Waste Bylaw along with a schedule of fines.
- Six intersections throughout the Town were realigned to remove 29,220 S.F. of pavement (Main St & Water St, Main St & Waverly Rd, Main St & Elm St, Middlesex St. & Waverly Rd, Andover St & Mass Ave, and Andover St & Osgood). 29,220 S.F. of grass area was added to Main St & Elm St, Middlesex St. & Waverly Rd, Main & Water Street, and Andover St & Mass Ave.
- The Machine Shop Village Renovation project is currently under construction. The project includes drainage improvements on Elm Street.

Planned activities for the next permit term have not been designated unless a BMP under this permit was not completed or is still under progress for completion. Once the General Permit for the next five years is available from EPA, the Town will prepare and submit a Notice of Intent to MassDEP and EPA for compliance with the new General Permit.

Part III. Summary of Minimum Control Measures

1. Public Education and Outreach

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities
1a Revised	Air stormwater messages on local cable	Division of Public Works	Air one new message for two weeks quarterly	The Town set up a list of 11 stormwater messages to air on the local cable access channel and the school channel. These 11 messages are broken down into 1-2 public service announcements which air throughout the day. The messages, which are targeted at homeowners, inform homeowners what they can do to prevent nonpoint source pollution.	Measurable goals for 2003 General Permit have been met. The Town plans to continue airing the nonpoint source pollution public service announcements on the local cable access channel and school channel.
1b Revised	Add stormwater information to Town's website	Division of Public Works	Complete update by end of second permit year	Links to information about stormwater included on the Town website during Permit Year 1 were maintained throughout Permit Year 9. This information is directed at adults, educators, and kids, and also includes links to local watershed websites. Information about protecting lakes from nonpoint source pollution included during Permit Year 1 also remains on the Town website. The stormwater messages that were prepared for the local cable access channel and were added to the Town website in Year 3 were maintained throughout Year 9.	Measurable goals for 2003 General Permit have been met.

1c Revised	Distribute/post non point source pollution posters	Division of Public Works	Post in all school and Town-owned buildings	Posters were distributed to and posted in the Town Library, Office of Community Development, Town Hall, and the Water Treatment Plant during Permit Year 1. No further activities were planned for subsequent years. The Town displays <i>Maintain Your BMPs</i> and <i>Stormwater and the Construction Industry</i> posters at the DPW and Community Development Offices. The North Andover School Department has developed a stormwater public education and participation program which includes - displaying posters in the schools, providing students stormwater crossword puzzles, and distributing stormwater stickers, bookmarks and brochures,	Measurable goals for 2003 General Permit have been met.
1d Revised	Inform Residents of Town's recycling programs/schedules	Division of Public Works	Distribute information to all residents by website, mailings, etc.	The Town's website contains information on Town's recycling programs and schedules. Mixed stream, curb-side pickup is now available throughout the Town. The DPW publishes a quarterly newsletter, <i>One Person's Trash</i> , which provides information on reducing, reusing and recycling. In permit Year 8 the Town implemented a rain barrel program. Distribution of rain barrels has been on-going since the program's inception. The North Andover Public School system offers an extensive recycling program. Information on the school recycling program is located on the Town's website at: http://www.northandoverpublicschools.com/sargent/pto/sargpto_collection_programs.cfm	Measurable goals for 2003 General Permit have been met.

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities
2a Revised	Collect household hazardous waste from residents	Division of Public Works	Hold household hazardous waste collection day twice per year.	North Andover held Household Hazardous Waste Collection Days twice this year on April 16, 2011 and October 15, 2011 from 9am to 1pm at the DPW garage. Approximately 78 residents participated and the Town collected a variety of solvents, paints, aerosols, pesticides, oxidizers and acids. The Town holds a general household hazardous waste collection day on the third Saturday of each month from 9am to noon.	The North Andover Household Hazardous Waste Collection Day was held on April 21, 2012 (165 residents) and same pollutants) and will be held again in October 2012.
2b Revised	Collect & Recycle waste oil	Division of Public Works	Collect waste oil from residents twice per month	The DPW collects waste oil for recycling on the first and third Saturday of every month from 9am to noon at the DPW garage.	North Andover continues to collect waste oil from residents twice per month.
2c Revised	Develop Stormwater Hotline	Division of Public Works	Create phone number(s) & inform residents of hotline	The Town continued to have in place a stormwater hotline to track illegal dumping, with information included on the Town website. The Town wants residents to be able to call the hotline and obtain information, ask questions, provide feedback, and report illegal dumping.	Measurable goals for 2003 General Permit have been met. North Andover continues to use the stormwater hotline.

2d	Revised	Coordinate an annual, voluntary waterways cleanup day	Division of Public Work/Con Com	Hold waterways cleanup day once per year beginning in the Spring of 2005 (Permit Year 3)	North Andover held their 9th annual Town-wide Earth Day Clean-up on April 30, 2011 from 8:30am to 3:30pm. Residents volunteered to pick up litter and were allowed to focus their efforts in a part of Town of their choosing. This year volunteers picked up more than 4,000 lbs of trash. The Shawshen River Watershed Association held several river clean up trips from April through September.	Measurable goals for 2003 General Permit have been met. The 10 th annual Town-wide Earth Day Clean-up will be held on April 28, 2012 from 8:30 am to 3:30 pm.
2e	Revised	Make SWMP available for public review/comment	Division of Public Works	Post SWMP on Town website, in library, in DPW office	Copies of the SWMP created for the Town were placed in the Town Library, at the DPW office, and the SWMP was posted on the Town website during Permit Year 1. The SWMP remained available at these locations through Permit Year 5 and is still available on the Town's website.	Measurable goals for 2003 General Permit have been met. The SWMP is available on the Town's website.

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities
3a Revised	Map outfalls, receiving waters and storm drains	Division of Public Works	Complete mapping by end of fourth permit year	Outfall mapping in urbanized areas was completed in 2008. In Permit Year 9, the Town began detailed outfall mapping of the Cochickewick Brook.	Measurable goals for 2003 General Permit have been met. The Town will continue detailed outfall mapping.
3b Revised	Develop illicit discharge detection & elimination	Division of Public Works	Make recommendations for proposed plan	The Final IDDE Plan was completed in October 2010 by a working group comprised of multiple Town departments. The plan establishes actions, procedures, and a timeline for IDDE activities to comply with both the 2003 General Permit and many of the anticipated 2012 North Coastal Small MS4 General Permit requirements. During Permit Year 9 the Town identified, rehabbed and repaired three illicit discharges.	Measurable goals for 2003 General Permit have been met.
3c Revised	Review existing bylaws and regulations	Division of Public Works	Determine whether existing bylaws/regulations are adequate	The Town finished reviewing their existing regulations with regard to illicit discharge detection and elimination in the third permit year. No goals related to this item were planned for Permit Year 9.	Measurable goals for 2003 General Permit have been met. The Town will continue to monitor illicit discharges.
3d Revised	Develop/modify general illicit discharge bylaw	Division of Public Works	If necessary, propose recommendation for bylaw updates.	The Town developed a general illicit discharge bylaw that meets USEPA requirements during the fourth permit year. The Stormwater Management & Erosion Control Bylaw was adopted on May 12, 2009, which also adopts MA Stormwater Standard 10 to prohibit illicit discharges by reference.	Measurable goals for 2003 General Permit have been met.

3c	Present bylaw for Town meeting action	Division of Public Works	Make presentations for Town meeting action, if necessary.	North Andover adopted the Stormwater Management & Erosion Control Bylaw on May 12, 2009. The Regulations were adopted on February 15, 2011. In FY 12, DPW and WTP requested \$90,000 for NPDES tasks. The budget was approved at Town Meeting.	Measurable goals for 2003 General Permit have been met.
Revised					

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities
4a	Review existing bylaws and regulations	DPW/Planning/Con Com	Determine whether existing bylaws/regulations are adequate	The Town finished reviewing the relevant sections of their Rules and Regulations governing the Subdivision of Land and the Zoning Bylaws in fourth year of the permit. North Andover adopted the Stormwater Management & Erosion Control Bylaw on May 12, 2009. The Regulations were adopted on February 15, 2011.	Measurable goals for 2003 General Permit have been met.
Revised					
4b	Develop/modify bylaws for construction site runoff	DPW/Planning/Con Com	If necessary, propose recommendations for bylaw updates	In the fourth year of the permit, the Town completed the development of a bylaw for the control of construction site runoff. The Town adopted the Stormwater Management & Erosion Control Bylaw on May 12, 2009.	Measurable goals for 2003 General Permit have been met.
Revised					
4c	Present bylaw for Town meeting action	DPW/Planning/Con Com	Make presentations for Town Meeting action, if necessary.	The Town adopted the Stormwater Management & Erosion Control Bylaw on May 12, 2009.	Measurable goals for 2003 General Permit have been met.
Revised					
4d	Review existing site inspection practices	DPW/Planning/Con Com	Determine whether existing practices are adequate	During the fourth permit year, the Town completed the development of a bylaw for the control of construction site runoff, including requirements for construction period site inspections.	Measurable goals for 2003 General Permit have been met.
Revised					

4/27/12

P

Municipality/Organization: North Andover, MA

EPA NPDES Permit Number: MAR041214

MassDEP Transmittal Number: W-034970

Annual Report Number & Reporting Period: Year 9
April 1, 2011 – March 31, 2012

NPDES PII Small MS4 General Permit Annual Report (Due: May 1, 2012)

Part I. General Information

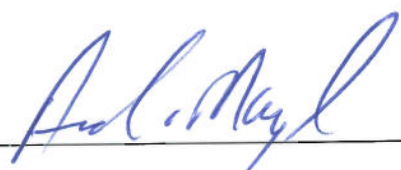
Contact Person: Eugene P. Willis, P.E. **Title:** Town Engineer

Telephone #: (978) 685-0950 **Email:** gwillis@townofnorthandover.com

Mailing Address: 384 Osgood Street, North Andover, MA 01845

Certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: 

Printed Name: Andrew W. Maylor

Title: Town Manager

Date: 4/25/12

Part II. Self-Assessment

As of the end of Year 9, the Town has achieved nearly all of the measurable goals for the BMPs selected in the 2003 Notice of Intent and those added in subsequent years to reflect unplanned stormwater activities by the Town.

Stormwater management activities to note include:

- Three illicit discharges were identified during Permit Year 9:
 - A Broken sewer service was identified at 125 Water St. leaking into storm drain.
 - Camera line to find discharge and repaired sewer service.
 - Paint was discharged into catch basin at 157 Berkeley Rd.
 - Visited site spoke w/ homeowner
 - Paint was latex paint
 - Cleaned catch basin sump of debris
 - U-pole broken sewer main at 24 Marblehead St.
 - Repaired sewer service
- The Sewer Department hired a contractor to remove roots and install a 1500 ft PVC liner in the Old Westside Trunk Sewer along the Shawsheen River. This project greatly reduced the threat of sanitary sewer overflows (SSOs) into the Shawsheen River.
- The Water Department cleaned sediment from underground sedimentation bays on Bonnie Lane and repaired damaged drainage at the Water Treatment plant where sediment was running into Lake Cochickewick.
- The Town of North Andover received a \$125,000 grant to design and rehabilitate existing manholes flowing into the Rea's Pond and Winter Street Sewer Pumping Stations that are infiltrated with stormwater during strong water events.
- The Town has formed a NPDES Subcommittee, which is comprised of members of the Planning, Conservation, Water & Sewer, Engineering, Facilities, GIS, Community Development and School Department.
- The Town sent out a Dog Waste Public Service Announcement in the annual Consumer Confidence Report to notify residents of the Dog Waste Bylaw along with a schedule of fines.
- Six intersections throughout the Town were realigned to remove 29,220 S.F. of pavement (Main St & Water St, Main St & Waverly Rd, Main St & Elm St, Middlesex St. & Waverly Rd, Andover St & Mass Ave, and Andover St & Osgood). 29,220 S.F. of grass area was added to Main St & Elm St, Middlesex St. & Waverly Rd, Main & Water Street, and Andover St & Mass Ave.
- The Machine Shop Village Renovation project is currently under construction. The project includes drainage improvements on Elm Street.

Planned activities for the next permit term have not been designated unless a BMP under this permit was not completed or is still under progress for completion. Once the General Permit for the next five years is available from EPA, the Town will prepare and submit a Notice of Intent to MassDEP and EPA for compliance with the new General Permit.

Part III. Summary of Minimum Control Measures

1. Public Education and Outreach

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities
1a Revised	Air stormwater messages on local cable	Division of Public Works	Air one new message for two weeks quarterly	The Town set up a list of 11 stormwater messages to air on the local cable access channel and the school channel. These 11 messages are broken down into 1-2 public service announcements which air throughout the day. The messages, which are targeted at homeowners, inform homeowners what they can do to prevent nonpoint source pollution.	Measurable goals for 2003 General Permit have been met. The Town plans to continue airing the nonpoint source pollution public service announcements on the local cable access channel and school channel.
1b Revised	Add stormwater information to Town's website	Division of Public Works	Complete update by end of second permit year	Links to information about stormwater included on the Town website during Permit Year 1 were maintained throughout Permit Year 9. This information is directed at adults, educators, and kids, and also includes links to local watershed websites. Information about protecting lakes from nonpoint source pollution included during Permit Year 1 also remains on the Town website. The stormwater messages that were prepared for the local cable access channel and were added to the Town website in Year 3 were maintained throughout Year 9.	Measurable goals for 2003 General Permit have been met.

1c Revised	Distribute/post non point source pollution posters	Division of Public Works	Post in all school and Town-owned buildings	<p>Posters were distributed to and posted in the Town Library, Office of Community Development, Town Hall, and the Water Treatment Plant during Permit Year 1. No further activities were planned for subsequent years. The Town displays <i>Maintain Your BMPs</i> and <i>Stormwater and the Construction Industry</i> posters at the DPW and Community Development Offices.</p> <p>The North Andover School Department has developed a stormwater public education and participation program which includes - displaying posters in the schools, providing students stormwater crossword puzzles, and distributing stormwater stickers, bookmarks and brochures.</p>	Measurable goals for 2003 General Permit have been met.
1d Revised	Inform Residents of Town's recycling programs/schedules	Division of Public Works	Distribute information to all residents by website, mailings, etc.	<p>The Town's website contains information on Town's recycling programs and schedules. Mixed stream, curb-side pickup is now available throughout the Town. The DPW publishes a quarterly newsletter, <i>One Person's Trash</i>, which provides information on reducing, reusing and recycling.</p> <p>In permit Year 8 the Town implemented a rain barrel program. Distribution of rain barrels has been on-going since the program's inception.</p> <p>The North Andover Public School system offers an extensive recycling program. Information on the school recycling program is located on the Town's website at: http://www.northandoverpublicschools.com/sargent/pto/sargpto_collection_programs.cfm</p>	Measurable goals for 2003 General Permit have been met.

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities
2a Revised	Collect household hazardous waste from residents	Division of Public Works	Hold household hazardous waste collection day twice per year.	North Andover held Household Hazardous Waste Collection Days twice this year on April 16, 2011 and October 15, 2011 from 9am to 1pm at the DPW garage. Approximately 78 residents participated and the Town collected a variety of solvents, paints, aerosols, pesticides, oxidizers and acids. The Town holds a general household hazardous waste collection day on the third Saturday of each month from 9am to noon.	The North Andover Household Hazardous Waste Collection Day was held on April 21, 2012 (165 residents) and same pollutants) and will be held again in October 2012.
2b Revised	Collect & Recycle waste oil	Division of Public Works	Collect waste oil from residents twice per month	The DPW collects waste oil for recycling on the first and third Saturday of every month from 9am to noon at the DPW garage.	North Andover continues to collect waste oil from residents twice per month.
2c Revised	Develop Stormwater Hotline	Division of Public Works	Create phone number(s) & inform residents of hotline	The Town continued to have in place a stormwater hotline to track illegal dumping, with information included on the Town website. The Town wants residents to be able to call the hotline and obtain information, ask questions, provide feedback, and report illegal dumping.	Measurable goals for 2003 General Permit have been met. North Andover continues to use the stormwater hotline.

<p>2d</p> <p>Revised</p>	<p>Coordinate an annual, voluntary waterways cleanup day</p>	<p>Division of Public Work/Con Com</p>	<p>Hold waterways cleanup day once per year beginning in the Spring of 2005 (Permit Year 3)</p>	<p>North Andover held their 9th annual Town-wide Earth Day Clean-up on April 30, 2011 from 8:30am to 3:30pm. Residents volunteered to pick up litter and were allowed to focus their efforts in a part of Town of their choosing. This year volunteers picked up more than 4,000 lbs of trash.</p> <p>The Shawshen River Watershed Association held several river clean up trips from April through September.</p> <p>Copies of the SWMP created for the Town were placed in the Town Library, at the DPW office, and the SWMP was posted on the Town website during Permit Year 1. The SWMP remained available at these locations through Permit Year 5 and is still available on the Town's website.</p>	<p>Measurable goals for 2003 General Permit have been met.</p> <p>The 10th annual Town-wide Earth Day Clean-up will be held on April 28, 2012 from 8:30 am to 3:30 pm.</p>
<p>2e</p> <p>Revised</p>	<p>Make SWMP available for public review/comment</p>	<p>Division of Public Works</p>	<p>Post SWMP on Town website, in library, in DPW office</p>	<p>The Shawshen River Watershed Association held several river clean up trips from April through September.</p> <p>Copies of the SWMP created for the Town were placed in the Town Library, at the DPW office, and the SWMP was posted on the Town website during Permit Year 1. The SWMP remained available at these locations through Permit Year 5 and is still available on the Town's website.</p>	<p>Measurable goals for 2003 General Permit have been met.</p> <p>The SWMP is available on the Town's website.</p>

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities
3a Revised	Map outfalls, receiving waters and storm drains	Division of Public Works	Complete mapping by end of fourth permit year	Outfall mapping in urbanized areas was completed in 2008. In Permit Year 9, the Town began detailed outfall mapping of the Cochickewick Brook.	Measurable goals for 2003 General Permit have been met. The Town will continue detailed outfall mapping.
3b Revised	Develop illicit discharge detection & elimination	Division of Public Works	Make recommendations for proposed plan	The Final IDDE Plan was completed in October 2010 by a working group comprised of multiple Town departments. The plan establishes actions, procedures, and a timeline for IDDE activities to comply with both the 2003 General Permit and many of the anticipated 2012 North Coastal Small MS4 General Permit requirements. During Permit Year 9 the Town identified, rehabbed and repaired three illicit discharges.	Measurable goals for 2003 General Permit have been met.
3c Revised	Review existing bylaws and regulations	Division of Public Works	Determine whether existing bylaws/regulations are adequate	The Town finished reviewing their existing regulations with regard to illicit discharge detection and elimination in the third permit year. No goals related to this item were planned for Permit Year 9.	Measurable goals for 2003 General Permit have been met. The Town will continue to monitor illicit discharges.
3d Revised	Develop/modify general illicit discharge bylaw	Division of Public Works	If necessary, propose recommendation for bylaw updates.	The Town developed a general illicit discharge bylaw that meets USEPA requirements during the fourth permit year. The Stormwater Management & Erosion Control Bylaw was adopted on May 12, 2009, which also adopts MA Stormwater Standard 10 to prohibit illicit discharges by reference.	Measurable goals for 2003 General Permit have been met.

3c Revised	Present bylaw for Town meeting action	Division of Public Works	Make presentations for Town meeting action, if necessary.	North Andover adopted the Stormwater Management & Erosion Control Bylaw on May 12, 2009. The Regulations were adopted on February 15, 2011. In FY 12, DPW and WTP requested \$90,000 for NPDES tasks. The budget was approved at Town Meeting.	Measurable goals for 2003 General Permit have been met.
---------------	---------------------------------------	--------------------------	---	--	---

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities
4a Revised	Review existing bylaws and regulations	DPW/Planning/Con Com	Determine whether existing bylaws/regulations are adequate	The Town finished reviewing the relevant sections of their Rules and Regulations governing the Subdivision of Land and the Zoning Bylaws in fourth year of the permit. North Andover adopted the Stormwater Management & Erosion Control Bylaw on May 12, 2009. The Regulations were adopted on February 15, 2011.	Measurable goals for 2003 General Permit have been met.
4b Revised	Develop/modify bylaws for construction site runoff	DPW/Planning/Con Com	If necessary, propose recommendations for bylaw updates	In the fourth year of the permit, the Town completed the development of a bylaw for the control of construction site runoff. The Town adopted the Stormwater Management & Erosion Control Bylaw on May 12, 2009.	Measurable goals for 2003 General Permit have been met.
4c Revised	Present bylaw for Town meeting action	DPW/Planning/Con Com	Make presentations for Town Meeting action, if necessary.	The Town adopted the Stormwater Management & Erosion Control Bylaw on May 12, 2009.	Measurable goals for 2003 General Permit have been met.
4d Revised	Review existing site inspection practices	DPW/Planning/Con Com	Determine whether existing practices are adequate	During the fourth permit year, the Town completed the development of a bylaw for the control of construction site runoff, including requirements for construction period site inspections..	Measurable goals for 2003 General Permit have been met.

4e	Develop/modify site inspection practices	DPW/Planning/ Con Com	If necessary, make recommendations. for updating existing practices	During the fifth permit year, the Town made some changes to their erosion/sedimentation control and drainage submittal requirements, as well as their site inspection practices.	Measurable goals for 2003 General Permit have been met.
Revised					

5. Post-Construction Stormwater Management in New Development and Redevelopment

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities
5a Revised	Review existing bylaws and regulations	DPW/Planning/ Con Com	Determine whether existing bylaws/regs are adequate	The Town finished reviewing the relevant sections of their Rules and Regulations governing the Subdivision of Land and the Zoning Bylaws during the third permit year. No goals related to this item were planned for Permit Year 9. The Town adopted Regulations for the Stormwater Management & Erosion Control Bylaw on February 15, 2011.	Measurable goals for 2003 General Permit have been met.
5b Revised	Develop/modify bylaws for post-construction runoff	DPW/Planning/ Con Com	If necessary, propose recommend. for bylaw updates	During the fourth permit year, the Town developed a post-construction stormwater management bylaw that meets US EPA requirements and references MA Stormwater Management Standards. The Town posted the Stormwater Management & Erosion Control Bylaw and Regulations on the Town's website in April 2011.	Measurable goals for 2003 General Permit have been met.
5c	Present bylaw for Town meeting action	DPW/Planning/ Con Com	Make presentations for Town meeting action, if necessary	During the fourth permit year, the post-construction stormwater management bylaw was presented for Town	Measurable goals for 2003 General Permit have been met.

Revised				Meeting action. However, the bylaw did not pass. During the fifth permit year, the bylaw was revised and selected information was pulled out to include in a separate regulation. The bylaw was revised with input provided from the Planning Department and Conservation Commission. The Town adopted the Stormwater Management & Erosion Control Bylaw on May 12, 2009. The Regulations were adopted on February 15, 2011.	
5d	Review existing site inspection practices	DPW/Planning/ Con Com	Determine whether existing practices are adequate	During the fourth permit year, the Town completed review of their existing site inspection and maintenance practices to determine whether they comply with USEPA's stormwater management plan requirements. The Planning Board approved the first Land Disturbance Permit in August 2011.	Measurable goals for 2003 General Permit have been met.
Revised					
5e	Develop/modify site inspection practices	DPW/Planning/ Con Com	If necessary, make recommendations for updating existing practices	During the fifth permit year, the Town made any necessary changes to their existing site inspection and maintenance practices to bring them into compliance with the USEPA's stormwater management plan requirements. The Planning Board and the Conservation Commission now require applicants to provide a calculation of total square footage of increased impervious area as part of the as-built submission.	Measurable goals for 2003 General Permit have been met.
Revised					

6. Pollution Prevention and Good Housekeeping in Municipal Operations

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities
6a	Sweep streets	Division of Public Works	Sweep all Town streets once per year; Stevens Pond 2/yr.	During Permit Year 9, 270 lane miles of roadway were swept of winter sand and Stevens Pond was swept twice. The volume of sweepings generated was 360 cubic yards, Ground speed controls were installed on sanders and the Town switched from sand to total salt, which has reduced the amount of sediment on the roads. The Town is also doing more pre-treating and has installed pavement sensors in their anti-icing vehicles to make salt use more efficient.	Continue to sweep all Town street once per year and Stevens Pond two times per year.
Revised					
6b	Clean catch basins	Division of Public Works	Develop & implement cleaning schedule; Stevens Pond 1/yr.	During Permit Year 9, 295 catch basins were cleaned mechanically or by hand. Material from the catch basin cleaning is disposed of at the Cyr Recycle Center on Sharpener's Pond Rd.	Continue to clean catch basins as needed. The Town plans on filing a Beneficial Use Determination (BUD) with MassDEP to allow street sweepings and catch basin tailings to be mixed with mulch to create loam for road shoulder work
Revised					

6c	Train municipal employees at each facility	Division of Public Works	Target all applicable municipal facilities	<p>The Town started to train employees at all applicable municipal facilities during the fourth permit year. During the fifth permit year, the Town completed the required training, which included holding a training session with municipal employees from the Fire Department, School Department, Department of Public Works, and Youth Services.</p> <p>During Permit Year 9 DPW employees attended the Center for Watershed 2011 webcast series.</p> <p>The Town is currently developing a Stormwater Pollution and Prevention Plan and an Oil Spill Prevention Control and Countermeasure Plan for the DPW.</p> <p>The Town has formed a NPDES Subcommittee, which is comprised of members of the Planning, Conservation, Water & Sewer, Engineering, Facilities, GIS, Community Development and School Department. The subcommittee met 5 times during Permit Year 9</p> <p>Engineering monitors practices at municipal facilities through day-to-day activities and communications.</p>	<p>Measurable goals for 2003 General Permit have been met.</p> <p>DPW employees will continue to attend the Center for Watershed 2012 webcast series.</p> <p>The Town will complete the Stormwater Pollution and Prevention Plan and the Oil Spill Prevention Control and Countermeasure Plan for the DPW.</p>
6d	Perform follow-ups to ensure required practices are met	Division of Public Works	Target all applicable municipal facilities	<p>The Town plans to periodically check with the Fire Department, School Department, Department of Public Works, and Youth Services to ensure that those items covered in the municipal employee training program are being adhered to.</p>	

7. BMPs for Meeting Total Maximum Daily Load (TMDL) Waste Load Allocations (WLA)

BMP #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities
TMDL-1	Check current impairments	Division of Public Works	Check current MA Integrated List of Waters each ear for newly listed or delisted receiving waters in North Andover	The Bacteria TMDL for the Shawsheen River Basin {MA83-01-2002-24} has been in effect since August 2002. See WLA Assessment below for BMPs that will reduce North Andover's bacteria contribution to the watershed. Other waters in North Andover listed as Category 5 on the MA 2010 Integrated List of Waters include: <ul style="list-style-type: none"> • Salem Pond (turbidity) • Lake Cochichewick (metals) • Stevens Pond (metals) • Merrimack River (nutrients, pathogens, priority organics) 	Measurable goals for 2003 General Permit have been met. The Town will continue to monitor the status of receiving waters and pursue projects that aid the reduction of pollutants of concern, particularly bacteria levels in the Shawsheen River.
	Revised				

7b. WLA Assessment

The Report "Bacteria TMDL for the Shawsheen River Basin {MA83-01-2002-24; August 2002}" is final and was approved in 2002; there was only one monitoring station indicated for the Town of North Andover-SH17.8 The Shawsheen River just downstream of Massachusetts Avenue and had high fecal coliform counts during both dry & wet weather sampling in 1997.

TMDL sets allowable bacteria levels for urban runoff and point sources equivalent to the water quality standard; for sewer leaks, sanitary sewer overflows, illicit connections and failing septic systems are set equal to zero

The TMDL does not dictate or require any specific individual controls at a particular outfall or site in North Andover.

The following activities and BMPs will help reduce North Andover's bacteria contribution to the Shawsheen watershed and meet WLAs:

Stormwater management activities to note include:

- Three illicit discharges were identified during Permit Year 9:
 - A Broken sewer service was identified at 125 Water St. leaking into storm drain.
 - Camera line to find discharge and repaired sewer service.
 - Paint was discharged into catch basin at 157 Berkeley Rd.
 - Visited site spoke w/ homeowner
 - Paint was latex paint
 - Cleaned catch basin sump of debris
 - U-pole broken sewer main at 24 Marblehead St.
 - Repaired sewer service
- The Sewer Department hired a contractor to remove roots and install a 1500 ft PVC liner in the Old Westside Trunk Sewer along the Shawsheen River. This project greatly reduced the threat of sanitary sewer overflows (SSOs) into the Shawsheen River.
- The Water Department cleaned sediment from underground sedimentation bays on Bonnie Lane and repaired damaged drainage at the Water Treatment plant where sediment was running into Lake Cochickewick.
- The Town of North Andover received a \$125,000 grant to design and rehabilitate existing manholes flowing into the Rea's Pond and Winter Street Sewer Pumping Stations that are infiltrated with stormwater during strong water events.
- The Town has formed a NPDES Subcommittee, which is comprised of members of the Planning, Conservation, Water & Sewer, Engineering, Facilities, GIS, Community Development and School Department.
- The Town sent out a Dog Waste Public Service Announcement in the annual Consumer Confidence Report to notify residents of the Dog Waste Bylaw along with a schedule of fines.
- Six intersections throughout the Town were realigned to remove 29,220 S.F. of pavement (Main St & Water St, Main St & Waverly Rd, Main St & Elm St, Middlesex St. & Waverly Rd, Andover St & Mass Ave, and Andover St & Osgood). 29,220 S.F. of grass area was added to Main St & Elm St, Middlesex St. & Waverly Rd, Main & Water Street, and Andover St & Mass Ave.
- The Machine Shop Village Renovation project is currently under construction. The project includes drainage improvements on Elm Street.

The following table summarizes the WLA for the Shawsheen River:

Fecal Coliform Wasteload Allocations (WLAs) and Load Allocations (LAs) for the Shawsheen River and Identified Tributary Streams		
Bacteria Source Category	WLA (organisms/100ml)	LA (organisms/100ml)
Point Source	Geomean \leq 200 10% \leq 400	
Sewer leaks	0	0
Sanitary Sewer Overflow	0	0
Illicit Sewer Connections	0	
Failing Septic Systems	0	0
Direct Wildlife		Geomean \leq 200 10% \leq 400
Urban Stormwater Runoff	Geomean \leq 200 10% \leq 400	Geomean \leq 200 10% \leq 400

Part IV. Summary of Information Collected and Analyzed

Part V. Program Outputs & Accomplishments (OPTIONAL)

(Since beginning of permit coverage unless specified otherwise by a **, which indicates response is for period covering April 1, 2011 through March 31, 2012)

Programmatic

	(Preferred Units)	Response
Stormwater management position created/staffed	(y/n)	n
Annual program budget/expenditures **	(\$)	\$88,000
Total program expenditures since beginning of permit coverage	(\$)	
Funding mechanism(s) (General Fund, Enterprise, Utility, etc)		General Fund and Enterprise Fund

Education, Involvement, and Training

	(# or %)	
Estimated number of property owners reached by education program(s)	(y/n)	y
Stormwater management committee established	(# or y/n)	
Stream teams established or supported	(y/n or mi.)	y
Shoreline clean-up participation or quantity of shoreline miles cleaned **	(mi.)	
Shoreline cleaned since beginning of permit coverage		
Household Hazardous Waste Collection Days	(#)	2
▪ days sponsored **	(# or %)	243
▪ community participation **	(tons or gal)	
▪ material collected **	(y/n)	y
School curricula implemented		

Legal/Regulatory

In Place Prior to **Phase II** Reviewing Existing **Authorities** Draft in **Review**

Adopted

Regulatory Mechanism Status (indicate with "X")	In Place Prior to Phase II	Reviewing Existing Authorities	Draft in Review
▪ Illicit Discharge Detection & Elimination			X
▪ Erosion & Sediment Control			X
▪ Post-Development Stormwater Management			X
Accompanying Regulation Status (indicate with "X")			
▪ Illicit Discharge Detection & Elimination			X
▪ Erosion & Sediment Control			X
▪ Post-Development Stormwater Management			X

Mapping and Illicit Discharges

	(Preferred Units)	Response
Outfall mapping complete	(%)	90%
Estimated or actual number of outfalls	(#)	905
System-Wide mapping complete (complete storm sewer infrastructure)	(%)	90%
Mapping method(s)		
▪ Paper/Mylar	(%)	10%
▪ CADD	(%)	90%
▪ GIS	(%)	
Outfalls inspected/screened **	(# or %)	12
Outfalls inspected/screened (Since beginning of permit coverage)	(# or %)	
Illicit discharges identified **	(#)	3
Illicit discharges identified (Since beginning of permit coverage)	(#)	
Illicit connections removed **	(#); and (est. gpd)	3

Illicit connections removed (Since beginning of permit coverage)	(#); and (est. gpd)	
% of population on sewer	(%)	70%
% of population on septic systems	(%)	30%

Construction

	(Preferred Units)	Response
Number of construction starts (>1-acre) **	(#)	1
Estimated percentage of construction starts adequately regulated for erosion and sediment control **	(%)	100%
Site inspections completed **	(# or %)	1
Tickets/Stop work orders issued **	(# or %)	0
Fines collected **	(# and \$)	0
Complaints/concerns received from public **	(#)	0

Post-Development Stormwater Management

Estimated percentage of development/redevelopment projects adequately regulated for post-construction stormwater control	(%)	100%
Site inspections (for proper BMP installation & operation) completed **	(# or %)	100%
BMP maintenance required through covenants, escrow, deed restrictions, etc.	(y/n)	y
Low-impact development (LID) practices permitted and encouraged	(y/n)	y

Operations and Maintenance

Average frequency of catch basin cleaning (non-commercial/non-arterial streets) **	(times/yr)	1
Average frequency of catch basin cleaning (commercial/arterial or other critical streets) **	(times/yr)	1
Qty of structures cleaned **	(#)	295
Qty. of storm drain cleaned **	(%, LF or mi.)	

Qty. of screenings/debris removed from storm sewer infrastructure **	(lbs. or tons)	200 cubic yards
Disposal or use of screenings (landfill, POTW, compost, beneficial use, etc.) **	(location)	BUD
Basin Cleaning Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	
• Hourly or per basin contract rate **	(\$/hr or \$ per basin)	
• Disposal cost**	(\$)	
Cleaning Equipment		
• Clam shell truck(s) owned/leased	(#)	1
• Vacuum truck(s) owned/leased	(#)	0
• Vacuum trucks specified in contracts	(y/n)	
• % Structures cleaned with clam shells **	(%)	
• % Structures cleaned with vactor **	(%)	

	(Preferred Units)	Response
Average frequency of street sweeping (non-commercial/non-arterial streets) **	(times/yr)	1
Average frequency of street sweeping (commercial/arterial or other critical streets) **	(times/yr)	1
Qty. of sand/debris collected by sweeping **	(lbs. or tons)	370 cubic yards
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) **	(location)	BUD
Annual Sweeping Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	
• Hourly or lane mile contract rate **	(\$/hr. or In mi.)	
• Disposal cost**	(\$)	
Sweeping Equipment		
• Rotary brush street sweepers owned/leased	(#)	1
• Vacuum street sweepers owned/leased	(#)	
• Vacuum street sweepers specified in contracts	(y/n)	
• % Roads swept with rotary brush sweepers **	%	100%
• % Roads swept with vacuum sweepers **	%	

Reduction (since beginning of permit coverage) in application on public land of: ("N/A" = never used; "100%" = elimination)		
▪ Fertilizers	(lbs. or %)	N/A
▪ Herbicides	(lbs. or %)	N/A
▪ Pesticides	(lbs. or %)	N/A
Integrated Pest Management (IPM) Practices Implemented	(y/n)	y
<i>Northeast Massachusetts Mosquito Control and Wetland Management District</i>		

	(Preferred Units)	Response
Average Ratio of Anti-/De-Icing products used **	% NaCl % CaCl ₂ % MgCl ₂ % CMA % Kac % KCl % Sand	100% CaCl
(also identify chemicals and ratios used in specific areas, e.g., water supply protection areas)		
Pre-wetting techniques utilized **	(y/n or %)	y
Manual control spreaders used **	(y/n or %)	6
Zero-velocity spreaders used **	(y/n or %)	0
Estimated net reduction or increase in typical year salt/chemical application rate	(±lbs/ln mi. or %)	-10%
Estimated net reduction or increase in typical year sand application rate **	(±lbs/ln mi. or %)	-100%
% of salt/chemical pile(s) covered in storage shed(s)	(%)	100%
Storage shed(s) in design or under construction	(y/n or #)	100%
100% of salt/chemical pile(s) covered in storage shed(s) by May 2008	(y/n)	y

Water Supply Protection

	# or y/n	N/A
Storm water outfalls to public water supplies eliminated or relocated		N/A
Installed or planned treatment BMPs for public drinking water supplies and their protection areas	# or y/n	N/A
<ul style="list-style-type: none"> • Treatment units induce infiltration within 500-feet of a wellhead protection area 	# or y/n	N/A